

In support of the present objection, the Examiner asserts that “[i]t is unclear as to what is meant by ‘fully activating the motor.’” (Final Office Action, page 2, lines 5-6). The specification, as originally filed, provides that “the motor is fully activated at time intervals to be determined by the circuit element provided for pulsing purposes” such that the frequency of current ripple proportional to the motor speed can be measured. (Specification, page 2, lines 12-15). The specification, also states that “motor M is fully activated for a certain period of time, or measuring time T_2 (see FIG. 2) after the expiration of time interval T_1 .” (Specification, page 4, lines 1-2).

In the context of claims 1, 6 and 8 and as supported by the specification, the term “fully activating the motor” indicates, *inter alia*, a period of time when the pulse-activated electric motor is activated with a positive current, such as having the positive current for the time interval T_2 illustrated in Fig. 3. Therefore, Applicants respectfully submit that the objection to the term “fully activating the motor” is improper and should be withdrawn.

II. Rejection of Claims under 35 U.S.C. §102(b)

Claims 1-8 were finally rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,236,175 issued to (“Mourad”). Applicants submit that currently pending claims 1-8 are patentable over Mourad.

To anticipate a claim under 35 U.S.C. § 102(b), the Office must demonstrate that each and every claim limitation is *identically disclosed* in a single prior art reference. (See Scripps Clinic & Research Foundation v. Genentech, Inc., 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). “The identical invention must be shown in as complete detail as is contained in the claim.” M.P.E.P. § 2131. If any claimed element is absent from a prior art reference, it cannot anticipate the claim. See Rowe v. Dror, 112 F.3d 473, 478 (Fed. Cir. 1997).

In Paragraph 4 of the final Office Action, the Examiner asserts Applicants’ previously-submitted arguments as being unpersuasive because Applicants have relied on “extremely broad terminology.” (page 3, line 12).

Fully Activating The Motor

As discussed above regarding the object to claims 1, 6 and 8, this claimed term is not overly broad. Applicants respectfully disagree with the Examiner’s assertion of this term having an overly broad interpretation because the term “could be interpreted in several ways.” (page 3, lines 12-13). The Examiner further states that the term could have the

broadest interpretation of “the motor is just ‘on.’” (page 3, line 13). Applicants are not asking the Examiner to improperly read limitations from the specification into the claims, in violation of In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Rather, as discussed below, Applicants submit that even with the broadest reasonable interpretation of the “fully activating the motor” term, Mourad fails to identically disclose all of the claimed limitations of claims 1, 6 and 8.

Mourad Discloses a System that Interrupts the Operation of the DC Electric Motor

For the sake of brevity, Applicants resubmit the positions offered in the Amendment filed January 30, 2006. Applicants further reiterate a primary component of the Mourad system, specifically that Mourad **cuts off power** to the motor 1 to measure the speed of the motor. For example, the abstract describes “the operation of interrupting the application of the said control system to the electronic switch...” As described in the specification (with reference to Fig. 1), Mourad discloses the “electronic unit 8 is set up to detect periodically the effective speed of rotation of the motor 1 by periodically **interrupting the application of the PWM control signal** to the gate of the electronic switch.” (emphasis added). (col. 3, lines 7-10).

Continuing on in same paragraph of the specification:

Upon occurrence of such an interruption, as illustrated by way of an example at instant t_1 in FIG. 2, the voltage V_o initially has a transient variation with a (modest) over voltage peak substantially equal to the forward conduction voltage of the recirculation diode 6, followed by a descent to a level which is on average lower than the voltage V_b (in Fig. 2, for clarity, the time scale between t_1 and t_2 has been expanded). Once this initial transient has decayed, whilst the application of the control signal to the input of the switch 5 remains interrupted (time interval between t_2 and t_3 in FIG. 2) the voltage V_o has an average value equal to the difference between the voltage V_B delivered by the source 4 and the electromotive force EMF developed across the winding 2 of the electric motor 1. In particular, between instants t_2 and t_3 , the variations of the voltage V_o has a marked ripple corresponding to the ripple of the electromotive force EMF due to the switching of the contacts between brushes and the segments of the commutator of the electric motor 1. (col. 3, lines 10-28)

As described above, Mourad discloses **interrupting** the voltage to the motor and it is through this interrupted period of time, voltage ripples are measured. In this interrupted stage, Mourad specifically discloses an **inactive** motor through the cessation of the PWM control signal from the PWM driver circuit 7 to the gate of the switch 5.

Mourad Fails to Identically Disclose All the Limitations of Claims 1, 6 and 8

Claims 1, 6 and 8 recite, *inter alia*, measuring a rotational speed of a pulse-activated electric motor including “fully activating the pulse-activated electric motor” (as recited in claims 1 and 8) and “an evaluation unit for determining a frequency of current ripples for a current flowing in a measured phase in which the pulse-activated electric motor is fully activated” (as recited in Claim 6).

In the present Office Action, the Examiner asserts support for maintaining the present rejection based on the breadth of the term “fully activating the motor.” Even granting the term its largest possible and reasonable scope, there still exists a fundamental distinction between the Mourad system and the claimed invention that makes the present rejection improper. Mourad requires the **interruption** of the motor. This interruption of the motor by its very nature is not and can not be consistent with “fully activating” the motor as recited in claims 1, 6 and 8. Regardless of the breadth of the “fully activating” term, it cannot be interpreted to include interrupting the engine as that is specifically contradictory to the term itself. Stated in more general terms, Mourad discloses a system that causes the motor to lose speed based on the interrupted activation and claims 1, 6 and 8 recite a motor having an increase in speed based on the full activation.

Mourad teaches a completely different system, a control circuit that interrupts the PWM control signal compared with the recited limitation of “fully activating the motor” of claims 1, 6 and 8. The Mourad system operates in a completely different manner by interrupting the operation of the engine, whereas the claimed invention of claims 1, 6 and 8 do not interrupt the engine, but in direct contrast, fully activate the motor. The Mourad system produces a completely different result, which is a speed measurement at the cost of reducing the speed of the motor, compared with the claimed invention of claims 1, 6 and 8 actually increasing the speed of the motor during the fully activated session. As such, Mourad fails to identical disclose the claimed invention of claims 1, 6 and 8.

Claims 2-5 and 7 depend from claims 1 and 6, respectively, and recite further patentable subject matter over Mourad. Claims 2-5 and 7 are allowable for at least the reasons stated above with respect to claims 1 and 6, respectively.

For at least the foregoing reasons, claim 1 and 6, as well as their dependent claims 2-5 and 7, are not anticipated by Mourad.

Conclusion

In light of the foregoing, Applicants respectfully submit that all of the pending claims 1-8 are in condition for allowance. It is therefore respectfully requested that the rejections be withdrawn. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

Respectfully submitted,

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